

MILLCREEK TOWNSHIP SEWER AUTHORITY

MILLCREEK MUNICIPAL BUILDING
3608 WEST 26TH STREET
ERIE, PENNSYLVANIA 16506

Phone (814) 835-6721

Fax (814) 835-6615

October 14, 2004

Mr. Anthony C. Oprendeck, Compliance Specialist
Water Management
PA DEP
230 Chestnut Street
Meadville PA 16335-3481

RE: Kearsarge Area Sanitary Sewer Overflows

Dear Mr. Oprendeck:

On September 9th and again on September 17, 2004, this area was negatively impacted by residual storms as a result of hurricanes off our southeastern coastline. As a result, Millcreek was forced to bypass at the following locations on the dates noted:

September 9, 2004

Kearsarge Pump Station
51st & Zimmerly
Patton & Church
Larchmont

September 17, 2004

Kearsarge Pump Station

All calls for both events were made in a timely manner.

In accordance with the most recent COA, we have enclosed check # 110461 in the amount of \$10,000 for the September 9th event and \$2,500 for the September 17th event, for a total of \$12,500 made payable to the "Commonwealth of PA Clean Water Fund".

Very truly yours,
Millcreek Township Sewer Authority

By: _____
George W. Riedesel, P.E., Manager

Cc: Authority Board
Twp. Supervisors
Wm. Steff, S.T.S.A.
Fish & Boat Commission

MSA-MT 2979



155 West 8th Street

October 14, 2004

Erie, Pennsylvania

Mr. George Riedesel, P.E.
Millcreek Township Sewer Authority
3608 West 26th Street
Erie, PA 16506

Phone: (814) 453 4394

Dear Mr. Riedesel:

Fax: (814) 455 6596

Enclosed please find a table in which we have tabulated the estimated volumes of water bypassed at the Kearsarge pump station at the September 9, 2004 overflow event. That event resulted from a major storm estimated at between a 30-year and a 70-year frequency event resulting from rainfall intensities recorded at four different stations at between 4-inches and 5-inches over twelve hours. The average or 4-1/2-inches over that time frame is given by NOAA to have a return frequency of 50 years.

The overflows summarized in the table included a volume of water between 4:00 a.m. and 8:00 a.m. which is attributed to the backup of Walnut Creek into some manholes which were open for construction purposes. The backup was caused by a fallen tree and a collapsed abandoned bridge abutment.

During the overflow event portable pumps were deployed to three different locations in the Millcreek system where they pumped from manholes into surface waters. Their estimated volumes are also included in the table, both as a total in the main table and as individual totals in the bottom.

The overflow at the station continued for approximately 23 hours beginning at 1:30 a.m. on the 9th. The overflow finally was completely closed at 12:10 a.m. on the 10th.

The stream backup and flooding to the fence of the pump station was first noted at about 4:30 a.m. and the stream was noted to be receding at about 6:00 a.m. The overflow pumps were deployed beginning at 3:00 a.m. and they are believed to have operated continually for the next eight hours until 11:00 a.m. They then operated intermittently on an off/on basis until 6:00 p.m. when they were collected and returned to the pump station. The pumps were deployed first to 52nd & Zimmerly and then to Church & Patton and then finally to Larchmont during the period 3:00 a.m. to 4:30 a.m.




Mr. George Riedesel, P.E.
October 14, 2004
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The volume of water estimated to have been bypassed at the Kearsarge pump station equaled 5.2 MG over the 23-hour period. The volume of water estimated to have been discharged from the system pumps equaled 813,000 which included 378,000 gallons at 52nd & Zimmerly; 129,000 gallons at Church & Patton; and 306,000 gallons at Larchmont.

Very truly yours,

CONSOER TOWNSEND ENVIRODYNE ENGINEERS, INC.



Gerald C. Allender, P.E.
Senior Associate

GCA:lb

Enclosure

MSA-MT 2981

KEARSARGE PUMP STATION
SEPTEMBER 9, 2004 BYPASS FLOWS

Date	Time	Metered Flows (GPM)	Corrected Flows (GPM)	Discharge Pressure (psi)	Forward Flows (GPM)	Bypass Flow		Bypass Volume gallon x 10 ⁻³	
						GPM	Δt	PS	Manhole
9/9/2004	1:30 a.m.	4,000	5,300				0		
	2:30 a.m.	5,400	7,200	40	3,400	3,800	1 hr.		
	3:30 a.m.	5,400	7,200		3,400		1 hr.	456	36
	4:30 a.m.	6,700	8,900	32	2,000	6,900	1 hr.	414	48
	7:30 a.m.	6,500	8,800		2,000	6,800	3 hr.		
	9:30 a.m.	6,400	8,800		2,000	6,800	2 hr.	2,040	
	10:30 a.m.	6,200	8,300		2,000	6,300	1 hr.	378	504
	11:00 a.m.	4,500	6,000		2,000	4,000	1/2 hr.	120	
	3:00 p.m.	4,500	6,000		2,000	4,000	4 hr.	960	
	4:00 p.m.	4,000	5,400		2,000	3,400	1 hr.	204	
	4:30 p.m.	3,500	4,700		2,000	2,700	1/2 hr.	81	
	6:00 p.m.	3,500	4,700	(36) +	2,800	1,900	1-1/2 hr.		225
	8:00 p.m.	3,500	4,700			1,900	2 hr.	396	
	9:00 p.m.	3,000	4,050	(32) +	3,400	650	1 hr.		
	12:00 a.m.	3,000	4,050		3,400	650	3 hr.	156	
	12:10 a.m.				0				
TOTAL								5,208	813

+ Estimated based on past history with overflows (i.e.) 13 turns

Manhole (MH) Bypass	Rate (gpm)	Hours Full-time	Hours Part-time	Gallon Total
52nd & Zimmerly	600	8	7.5	378,000
Patton & Church	200	7	7.5	129,000
Larchmont	600	6	7.5	306,000



CONSOER TOWNSEND ENVIRODYNE ENGINEERS, INC.

155 West 8th Street

October 14, 2004

Erie, Pennsylvania

Mr. George Riedesel, P.E.
Millcreek Township Sewer Authority
3608 West 26th Street
Erie, PA 16506

Phone: (814) 453 4394

Dear Mr. Riedesel:

Fax: (814) 455 6596

On September 17, 2004, there was an overflow event at the Kearsarge pump station as a result of rainfall beginning that morning.

Enclosed please find a table completed for that event in which pump flows are given along with an estimated forward flow based upon force main pressures. Forward flow goes to the Erie system and to the Erie Wastewater Treatment Plant. The difference between forward flow and pump flow equals those flows bypassed. Flows in gallons are given in the final two columns. The gallons given for each time interval indicated is shown in the first of those two columns. The summary of those volumes given at the bottom of the page of 1,914,000 gallons is the volume of flow estimated to have been discharged through the overflow to Walnut Creek.

Very truly yours,

CONSOER TOWNSEND ENVIRODYNE ENGINEERS, INC.

Gerald C. Allender, P.E.
Senior Associate

GCA:lb

Enclosure

MSA-MT 2983

KEARSARGE PUMP STATION
SEPTEMBER 17, 2004 OVERFLOW
BYPASS/PUMPING

Time	Meter	1.35 x Meter	Interval	Pressure	Forward Flow	Bypass gallon x 10 ⁻³	
						Δ	Σ
10:00 a.m.	3,700	5,000					
10:25 a.m.	3,800	5,130	0.5	40	3,700	43	
	5,500	7,425					
11:00 a.m.	4,800	6,480	0.5	41	3,700	99	
12:00 p.m.	4,500	6,075	1.0	38	3,600	148	
1:00 p.m.	4,000	5,400	1.0	38	3,600	108	
2:00 p.m.	3,500	4,725	1.0				
3:00 p.m.	3,500	4,725	1.0				
3:30 p.m.	3,500	4,725	0.5	43	3,700	168	
	4,000	5,400	0.5				
4:00 p.m.	4,000	5,400		30	2,000	102	
5:00 p.m.	5,200	7,020	1.0	34	2,600	265	
6:00 p.m.	5,200	7,020	1.0	30	2,000	301	
7:00 p.m.	5,200	7,020	1.0	32	2,300		
8:00 p.m.	5,000	6,750	1.0	27	1,600	309	
8:30 p.m.	4,500	6,075	0.5	33	2,600	142	
9:00 p.m.	4,200	5,670	0.5	37	3,400	68	
10:00 p.m.	3,800	5,130	1.0	41	3,700	86	
11:00 p.m.	3,200	4,320	1.0	44	3,900	25	
11:30 p.m.	Bypass Off						
TOTAL							1,914

Bypass = 1,914,000 gallons